

H nes co p questions une 2 .4ANS, ERS

4)

8) Consider the economy here

$$y_t = \bar{y} + \epsilon_t^{IS} \quad \& \quad r_t = \bar{r} + \epsilon_t^{AS}$$

$$\pi_t = \bar{\pi} + \alpha(y_t - \bar{y}) + \epsilon_t^{AS}$$

here π is the inflation rate, y is the output gap, ϵ^{IS} and ϵ^{AS} are uncorrelated with each other and are both mean zero iid. There is *no persistence* in these shocks and they cannot be predicted in the previous period. The central bank chooses r_t to minimize the loss function

$$L = E \left[\frac{1}{2} \pi^2 - \frac{1}{2} y^2 \right]$$

Note that I have assumed nothing so far about the relative importance of the two shocks: the variance of ϵ^{IS} might be insignificant while the variance of ϵ^{AS} is big or vice versa. Also, I have assumed nothing about the central bank's information: when it sets r_t , it might know the current values of both ϵ^{IS} and ϵ^{AS} or